

Serial No.: 09/754,167
Amendment dated August 12, 2004
Reply to Office Action dated
August 12, 2004

Attorney's Docket No.: 06816-022002/CIT 2387-C1

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently amended) A method, comprising:

obtaining information indicative of a plurality of different parameters, said plurality of different parameters representing at least a plurality of different kinds of information, which information is referenced to different units of measure each parameter having a nominal range, within which range the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values; and

using a plurality of towers indicative of values of the parameters and displaying each of said plurality of different parameters on a common display, with all parameters that are within a nominal range for the parameter ~~of values~~ each having a tower with a nominal same height as all other parameters that are within their respective nominal range and parameters which are ~~[[an]]~~ outside a ~~predefined~~ said nominal range having towers with an other-than-nominal height.

2. (Original) A method as in claim 1, wherein said displaying comprises displaying towers indicative of values of the parameters, and said specified way includes towers which

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have other-than-nominal height, wherein parameters within said nominal range have nominal height.

3. (Original) A method as in claim 1, wherein said displaying comprises arranging identification of a parameter along a first dimension, arranging categories of the parameters along a second dimension, and defining values indicative of comparison with said nominal range along a third dimension.

4. (Currently amended) A method, comprising:

obtaining information indicative of a plurality of different parameters, said plurality of different parameters representing at least a plurality of different kinds of information, which information is referenced to different units of measure, each parameter having a nominal range within which the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values; and

displaying each of said plurality of different parameters on a common display, in a way such that only parameters among said plurality of said parameters representing each of said different kinds of information, which are outside a ~~predefined~~ said nominal range, are shown in a specified way and parameters that are within said nominal range all being displayed the same;

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and

displaying said each of said plurality of parameters based on an amount by which they are outside of said nominal range.

5. (Original) A method as in claim 4, further comprising defining an alarm level for each of said plurality of parameters.

6. (Original) A method as in claim 5, further comprising displaying a common alarm grid representing alarm levels for each of said plurality of parameters, and wherein each of said parameters which is outside said nominal range is displayed according to its relationship with said common alarm grid.

7. (Original) A method as in claim 1, further comprising allowing the user to rearrange positions of display of various parameters.

8. (Original) A method as in claim 5, wherein said alarm level is a warning level.

9. (Original) A method as in claim 5, wherein said alarm level is a critical level.

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10. (Original) A method as in claim 5, wherein said alarm level is a limit alarm which indicates that a value of a parameter is an outside a specified limit.

11. (Original) A method as in claim 5, wherein said alarm limit comprises a range with a lower value and an upper value.

12. (Original) A method as in claim 5, wherein said alarm limit is a trend alarm which is based on a rate of change of a parameter, and indicates that a trend of a value of the parameter suggests that an alarm will occur in the future, prior to the alarm actually occurring.

13. (Currently amended) A method as in claim 6, further comprising allowing ~~objects~~ parameters in an alarm state to be moved to a special alarm category on said common display.

14. (Original) A method as in claim 13, wherein said displaying comprises stopping said displaying objects in the specified way when they are moved to the alarm category, such that all objects in the alarm category as displayed in the same way as other objects are displayed in other categories, when said other objects are not in the alarm state.

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15. (Original) A method as in claim 14, wherein said displaying comprises displaying objects having a height indicative of values of said parameters, and wherein said objects in the alarm category are displayed with zero height.

16. (Original) A method as in claim 15, wherein said objects are displayed with a height indicative of a percentage by which the parameter exceeds said nominal range and approaches said alarm level.

17. (Original) A method as in claim 5, further comprising displaying a color associated with a value of the parameter.

18. (Original) A method as in claim 12, further comprising monitoring a continual increase or decrease in a value of the parameter over a specified interval to establish said trend alarm.

19. (Original) A method as in claim 12, further comprising defining conditions, which establish a trend alarm, and monitoring said parameters for said conditions.

20. (Original) A method as in claim 12, further comprising

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monitoring a rate of change of a parameter over a specified period of time to establish said trend alarm.

21. (Original) A method as in claim 12, wherein said trend alarm includes a warning trend alarm and a critical level trend alarm.

22. (Original) A method as in claim 1, further comprising allowing actuation of a detail screen for a specified parameter, by allowing the user to click on a representation of the parameter using a graphical user interface.

23. (Original) A method as in claim 22, wherein said detail screen is on a pop up window.

24. (Original) A method as in claim 22, further comprising also displaying information on other similar parameters in said detail screen.

25. (Original) A method as in claim 24, wherein said other similar parameters comprise other parameters having a same parameter category as a selected parameter.

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26. (Original) A method as in claim 22, wherein said detail screen includes numbers representing values of the parameters.

27. (Original) A method as in claim 1, further comprising enabling an operation, which suppresses alarm notification for a specified time interval.

28. (Original) A method as in claim 12, further comprising storing historical data files indicative of parameter values, and using said historical data files to establish a trend alarm.

29. (Currently amended) A method, comprising:
obtaining information indicative of a plurality of different parameters collectively representing a plurality of different kinds of information, which different parameters have absolute values representing at least a plurality of different measurement units, each parameter having a nominal range, within which the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values;

displaying information about values of said parameters on a common graph with heights that represent parameter values, such that only parameters which differ from a ~~specified~~ said nominal

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range are displayed with a non-nominal height and parameters which are within said nominal range are all displayed with a same nominal height; and

allowing selection of parameters, which are displayed in said prominent way, and changing said parameters to be changed to being displayed in said non-prominent way.

30. (Currently amended) A method, comprising:

obtaining information indicative of a plurality of different parameters collectively representing a plurality of different kinds of information, which different parameters have absolute values representing at least a plurality of different measurement units each parameter having a nominal range, within which the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values;

displaying information about values of said parameters on a common graph such that only parameters which differ from a specified nominal range are displayed in a prominent way, and parameters which are within said nominal range are displayed in a non prominent way;

allowing selection of parameters, which are displayed in said prominent way, and changing said parameters to be changed to being displayed in said non-prominent way; and

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wherein said selection comprises moving said parameters displayed in said prominent way to a special section for parameters which are each outside said specified nominal range, and in which section all parameters are displayed in said non prominent way.

31. (Original) A method as in claim 29, wherein said selection comprises allowing reset of a parameter value, to display said parameter value in said non prominent way even when said parameter value is outside said nominal range, said reset continuing for a specified time.

32. (Original) A method as in claim 29, wherein said selection comprises selection of parameters, which are outside said nominal range.

33. (Original) A method as in claim 29, wherein said selection of parameters comprises selection of parameters, which are in an alarm state.

34. (Original) A method as in claim 33, further comprising defining an alarm group, having a plurality of parameters therein, each of which are in alarm, but are displayed in said

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non prominent way, and said allowing selection comprises
allowing the user to move said parameters to said alarm group.

35. (Original) A method as in claim 29, wherein said
parameters are displayed as items with variable height, a
nominal height representing a parameter that is within said
nominal range, and heights other than said nominal height
representing parameters outside said nominal range.

36. (Original) A method as in claim 35, further comprising
defining an alarm level for each of said parameters, and wherein
a height of said parameter that is outside said nominal range is
related to a percentage by which said parameter value exceeds
said nominal range and approaches said alarm level.

37. (Original) A method as in claim 35, further comprising
displaying a common alarm grid, at a height representing said
alarm level, and wherein each of said plurality of parameters
reaches said alarm level at an individual value which is
individual for said parameter.

38. (Original) A method as in claim 35, wherein said alarm
level is a warning level or critical level or a trend alarm.

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39. (Original) A method as in claim 29, further comprising defining at least one trend alarm, which indicates the trend of the value of the parameter suggests that an alarm will occur prior to the alarm actually occurring.

40. (Original) A method as in claim 39, further comprising monitoring a rate of change of a parameter over a specified period, determining if said rate of change of said parameter and said specified period exceeds a specified value, and establishing a trend alarm when said rate of change of said parameter and said specified period meets said specified criteria.

41. (Currently amended) A method, comprising:
monitoring a plurality of items of information from a plurality of information sources, each item of information being represented by a parameter and having a value in a specified form, at least one of said specified forms being different than another of said specified forms, so that at least a plurality of said items have different units which are un correlated to one another, each parameter having a nominal range, within which the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values;

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establishing, for each of said plurality of items, a nominal range of values within which said parameter is still maintained as within a normal value;

displaying a location, with only a nominal indication of the parameter value[[,]] for each of said parameter values that are within said nominal range so that each of said parameters that are within said nominal value being displayed the same way;
and

displaying an indication of a percentage by which the parameter value exceeds said nominal range and approaches an alarm value for each parameter that exceeds said nominal range.

42. (Original) A method as in claim 41, wherein said displaying an indication comprises displaying an item having a height whose value indicates said percentage, and wherein said displaying a nominal indication comprises displaying a location having nominal height.

43. (Original) A method as in claim 42, wherein said nominal height is a zero height.

44. (Original) A method as in claim 42, further comprising displaying said plurality of items of information in a plurality

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of different groups, and allowing user selection of said groups.

45. (Original) A method as in claim 44, wherein one of said groups is an alarm group, and allowing a user to move items, which are outside said nominal range into said alarm group.

46. (Original) A method as in claim 45, wherein items in said alarm group are displayed with said nominal height even when they are in alarm.

47. (Original) A method as in claim 41, wherein said displaying an indication comprises defining a dimension corresponding to an alarm limit, and displaying a value in said dimension indicating said percentage, and wherein said displaying said nominal indication comprises displaying a value having nominal value in said dimension.

48. (Original) A method as in claim 47, wherein said nominal value is a zero value.

49. (Original) A method as in claim 41, further comprising enabling a user to change a position of viewing said alarms.

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50. (Original) A method as in claim 41, further comprising monitoring rate of change of the parameter.

51. (Original) A method as in claim 50, further comprising and establishing an alarm when a specified rate of change occurs for a specified time.

52. (Original) A method as in claim 50, further comprising establishing an alarm when a rate of change value exceeds a predetermined limit.

53. (Original) A method as in claim 50, further comprising establishing an alarm based on said rate of change value.

54. (Original) A method as in claim 53, further comprising enabling a first alarm based on an alarm limit, and a second alarm based on said rate of change value, and separately displaying information indicating both said first alarm and said second alarm associated with a single indication.

55. (Original) A method as in claim 54, wherein said displaying both said first alarm and said second alarm uses colors to represent said first alarm and said second alarm.

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56. (Currently amended) A method, comprising:
obtaining information indicative of a plurality of
different parameters including at least a first parameter
defining a first kind of information having a first unit of
measure, and a second parameter defining a second kind of
information having a second unit of measure, where said first
unit of measure is unrelated to said second unit, each parameter
having a nominal range, within which the parameter does not
represent an alarm condition, and values outside said nominal
range representing alarm values;

defining a display including said plurality of different
parameters which displays each of said plurality of different
parameters;

defining a nominal range for each of said plurality of
different parameters; and

displaying parameters which are within said nominal range
to have the same [[a]] nominal value on said display such that
each parameter within said nominal range has the same nominal
value, and displaying parameters which are outside said nominal
range with a value related to an amount by which said parameter
is outside said nominal range.

57. (Original) A method as in claim 56, wherein said

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nominal value is a zero value.

58. (Original) A method as in claim 56, wherein said displaying parameters comprises displaying parameters, which have a height, and wherein said nominal value is a zero height.

59. (Original) A method as in claim 56, wherein said displaying parameters comprises displaying parameters which have a height, and said nominal value is a specified height such that each parameter within said nominal range has the same specified height.

60. (Original) A method as in claim 56, further comprising defining an alarm amount for each of said parameters, and displaying said parameters which are outside said nominal range with a value related to an amount by which the value exceeds said nominal range and approaches said alarm amount.

61. (Original) A method as in claim 56, wherein said defining a display comprises allowing user selection of a position of display of the plurality of parameters.

62. (Original) A method as in claim 61, wherein said

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parameters are grouped into specified groups, and said user selection comprises allowing a parameter to be moved to another group.

63. (Original) A method as in claim 62, wherein one of said groups is an alarm group, and wherein items in said alarm group are displayed with said nominal height even when in alarm.

64. (Original) A method as in claim 56, further comprising monitoring a rate of change of parameter values, and defining an alarm based on a rate of change value beyond the specified limit.

65. (Original) A method as in claim 64, wherein said rate of change beyond said specified limit includes a rate of change higher than a first specified amount.

66. (Original) A method as in claim 64, wherein said rate of change beyond said specified limit includes a rate of change beyond a first specified amount and for a specified time.

67. (Currently amended) A method, comprising:
obtaining information indicative of a plurality of

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different parameters, including at least a plurality of different kinds of information, and a plurality of different units for said different kinds of information, each parameter having a nominal range, within which the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values;

monitoring a rate of change of at least a plurality of said parameters;

monitoring an absolute value of said at least a plurality of said parameters;

providing a display with each of said plurality of different parameters based on said monitoring, said display showing only parameters whose absolute value is outside said nominal range exceeds a first threshold or whose rate of change value exceeds a second threshold is outside said nominal range.

68. (Original) A method as in claim 67, wherein said first threshold for said absolute value is a range of nominal values.

69. (Original) A method as in claim 67, wherein said second threshold for said rate of change values is a rate of change higher than a specified amount.

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70. (Original) A method as in claim 67, wherein said second threshold for said rate of change value is a rate of change higher than a specified amount which occurs for more than a specified period of time.

71. (Original) A method as in claim 67, further comprising separately indicating on said display, a) an absolute value outside of a range of nominal values, b) a rate of change value exceeding said second threshold, and c) both said absolute value outside of said range of nominal values and said rate of change in value exceeding said second threshold, as three different types of displays.

72. (Original) A method as in claim 67, wherein said display include locations for each of said parameters, and displays said each of said parameters along a prespecified dimension.

73. (Original) A method as in claim 72, wherein said parameters that do not exceed either threshold are displayed with a nominal value for the dimension.

74. (Original) A method as in claim 73, wherein said

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dimension is height, and said nominal value is a zero height.

75. (Original) A method as in claim 73, wherein said dimension is a height dimension.

76. (Original) A method, comprising:

obtaining information indicative of a plurality of different parameters, including at least a plurality of different kinds of information, each different kind of information capable of having a different unit of measure;

defining a range of nominal absolute values for each of said plurality of parameters;

defining a limit alarm related to rate of change for at least a plurality of said parameters; and

displaying information indicative of both a) whether said parameter exceeds said range of nominal absolute values and b) whether said each parameter exceeds said limit alarm, on a single indication for said parameter.

77. (Original) A method as in claim 76, wherein said displaying comprises defining a specified dimension for displaying said parameter and displaying said parameter according to said specified dimension.

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78. (Original) A method as in claim 77, wherein parameters that do not exceed said range of nominal absolute value are displayed with a nominal value according to said specified dimension.

79. (Original) A method as in claim 78, wherein said specified dimension is height, and said nominal value is a zero height.

80. (Cancelled)

81. (Cancelled)

82. (Cancelled)

83. (Currently amended) An apparatus, comprising:

a processing element, obtaining information indicative of a plurality of different parameters, said plurality of different parameters representing at least a plurality of different kinds of information, which information is referenced to different units of measure, each parameter having a nominal range, within which the parameter does not represent an alarm condition, and values outside said nominal range representing alarm values; and

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a display forming element, processing said plurality of different parameters to provide an output signal that defines a common display, in a way such that all ~~[[only]]~~ parameters among said plurality of said parameters representing each of said different kinds of information, which are ~~an outside a~~ in said predefined nominal range, are displayed the same ~~shown in a specified way~~.

84. (Original) An apparatus as in claim 83, further comprising a display, displaying said information formed by said display forming element.

85. (Original) An apparatus as in claim 83, wherein said display forming element forms towers indicative of values of the parameters, and said specified way includes towers which have other-than-nominal height, wherein parameters within said nominal range have nominal height.

86. (Previously presented) An apparatus as in claim 83, further comprising a memory, storing a nominal range for each of said plurality of parameters, and wherein said display forming element displaying said each of said plurality of parameters based on their relationship with said nominal range.

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87. (Original) A method as in claim 86, further comprising defining an alarm level for each of said plurality of parameters.

88. (Currently amended) A method as in claim 87, further comprising a user interface allowing parameters in an alarm state to be moved to a special alarm category on said common display.

89. (Original) A method as in claim 88, wherein said display forming element displays objects in the specified way when they are moved to the alarm category, such that all objects in the alarm category as displayed in the same way as other objects are displayed in other categories, when said other objects are not in the alarm state.

Kindly add the following new claims:

90. (New) A method as in claim 1, wherein said nominal height used for display of said parameters is a zero height.

91. (New) A method as in claim 4, wherein said nominal height used for said display its parameters is a zero height.